

ABSTRACT

In an image recognition apparatus (1), feature point extraction sections (10a) and (10b) extract feature points from a model image and an object image. Feature
5 quantity retention sections (11a) and (11b) extract a feature quantity for each of the feature points and retain them along with positional information of the feature points. A feature quantity comparison section (12) compares the feature quantities with each other to calculate the similarity or the dissimilarity and generates a candidate-associated feature point pair having a high possibility of correspondence.
10 A model attitude estimation section (13) repeats an operation of projecting an affine transformation parameter determined by three pairs randomly selected from the candidate-associated feature point pair group onto a parameter space. The model attitude estimation section (13) assumes each member in a cluster having the largest number of members formed in the parameter space to be an inlier. The model
15 attitude estimation section (13) finds the affine transformation parameter according to the least squares estimation using the inlier and outputs a model attitude determined by this affine transformation parameter.